

COOKING HOB

BACKGROUND OF THE INVENTION

5 1. Field of the Invention

This invention relates to a cooking hob.

2. State of the Art

Cooking hobs are a well known type of industrial, commercial
10 or domestic cooking appliance comprising one or more cooking rings
arranged to heat a cooking utensil which is stood thereon.
Typically, cooking hobs are set into apertures formed in a work
surface and the control knobs for the hob are provided on the top
of the hob alongside the (or each) cooking ring. However, in
15 industrial and commercial cooking hobs, the control knobs are
easily damaged and thus it is more practical and desirable to
provide the control knobs on a separate control panel provided at
the front of a cabinet underneath the work surface.

20 In order to mount the control panel at the front of the
cabinet, the person installing the hob has to electrically connect
the control panel to the body of the hob and then mount both
portions of the hob in-situ. Alternatively, the two portions of
the hob have to be electrically connected together once the two
25 portions of the hob are in-situ. In either event, it can be
difficult and time consuming to electrically connect the two
portions, especially if the wiring is complex. Moreover, there is
a risk that the person installing the hob could wire the control
panel incorrectly.

SUMMARY OF THE INVENTION

It is therefore an object of the invention to provide a cooking hob which alleviates the above-mentioned problems.

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In accordance with this invention, there is provided a cooking hob having a main body, one or more cooking rings on the body on the top surface of the hob, and a control panel on the front surface of the hob, the control panel being slidably mounted
10 to the body for forwards movement away from the body in a plane which extends substantially parallel to said top surface.

The cooking hob is a one-piece assembly, which is mounted in an aperture formed in the work surface in the conventional manner.
15 The control panel is then slid forwardly to meet an aperture formed in the front of the cabinet underneath the work surface. It will be appreciated that the control panel is straightforward to fit and requires no wiring because it is supplied fitted to the main body of the hob.

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In order to conceal and support the wiring between the control panel and the main body of the hob, a duct preferably extends rearwardly from the control panel.

25 Preferably the duct is a drawer-like member comprising an upwardly-facing channel having a bottom wall and opposite side walls, the control panel being mounted across one end of the channel, said walls of the duct enclosing the main body of the hob when the control panel is in its retracted position.

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Preferably, the control panel is also moveable within a plane which extends perpendicular to the direction of slidable movement, so that it can be aligned exactly with the aperture formed in the front of the cabinet underneath the work surface.

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Cooking hobs are known which require forced air cooling to prevent the internal components of the hob from overheating. One such hob where overheating can be a problem is a so called induction cooking hob, which uses high frequency magnetic fields to induce eddy currents in the base of the cooking utensil. No cooking utensil is an ideal conductor of electricity and thus the induced currents are subjected to power losses which result in the generation of heat. The generated heat combined with other heat generated by the magnetic coils and other circuits inside the hob can raise the internal temperature of the hob to unacceptable levels unless forced air cooling is applied.

Hitherto, forced air cooling has been achieved by providing a fan inside the hob, which draws air into the hob from the interior of the cabinet under the work surfaces. A disadvantage of this arrangement is that the interior of the cabinet is often hot, especially if the interior of the hob is vented into the cabinet.

It has been proposed to overcome this problem by providing ventilation grilles in the cabinet. However, such grilles are difficult and time consuming to fit, and are often located at a position on the cabinet where the flow of air is restricted.

Thus, preferably the hob comprises a cooling fan arranged to create a flow of air through the main body of the hob between an inlet and an outlet, said inlet and said outlet being positioned

adjacent said control panel on a portion of the hob which is also slidably mounted to the body for forwards movement away from the body in a plane which extends substantially parallel to said top surface.

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In this manner cool air is drawn from the front of the cabinet and the warm exhaust air is vented externally of the cabinet.

10 Preferably, air is drawn through the control panel to cool the panel.

Preferably, the inlet and outlet are connected to the main body of the hob by extendable ducts which extend along said
15 slidable drawer-like member.

Preferably, a filter is provided at said inlet.

Also in accordance with this invention, there is provided a
20 method of installing a cooking hob, comprising positioning the hob in an aperture formed in a work surface and sliding a control panel outwardly from a main body of the hob under the work surface to meet an aperture formed in the front of a cabinet under the work surface.

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Additional objects and advantages of the invention will become apparent to those skilled in the art upon reference to the detailed description taken in conjunction with the provided figures.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a cooking hob in accordance with the present invention.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An embodiment of this invention will now be described by way of an example with reference to the accompanying drawing.

10 Referring to the drawing, an induction cooking hob comprises a main body portion 10 which comprises a top plate 11 on which a plurality of cooking rings 12 are provided. The top plate 11 is mounted on a box-shaped housing 13 which contains the main internal components and induction coils of the hob.

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The hob also comprises a control panel 14 which is mounted at the front of a pull-out drawer 15 having a base 16 and side walls 17 upstanding from opposite side edges of the base 16. The upper edges of the side walls are slidably connected to respective side
20 walls of the housing 13 of the hob by runners (not shown).

The control panel 14 comprises a rectangular front surface which is inclined outwardly and downwardly from upper edge to its lower edge. The control panel 14 also comprises an under surface
25 which extends directly inwardly from the lower edge of the front surface.

The rear surface of the control panel 14 is electrically connected to the main body 10 of the hob by wires (not shown)
30 which extend inside the drawer 15. A plurality of control knobs,

dials and switches (not shown) are provided on the front surface of the control panel for controlling the cooking rings 12.

5 A cooling fan (not shown) mounted inside the main body 10 of the hob is arranged to create a flow of air through the main body 10 of the hob between an inlet 18 and an outlet 19 disposed on the under surface of the control panel 14. The inlet 18 and outlet 19 are connected to the main body 10 of the hob by respective elongate extendable corrugated ducts 20, 21 which extend inside
10 the drawer 15.

When the hob is supplied, the control panel 14 is fully retracted against the main body 10 of the hob. The hob is fitted in a kitchen by simply dropping it into an aperture 22 formed in a work surface 23 and the control panel 14 is then slid forwardly as
15 shown in the drawing, until it extends through an aperture 24 formed in the front wall 25 of a cabinet disposed below the work surface 23. The front panel 14 is preferably mounted to the drawer 15 in such a manner that a small amount of lateral movement is
20 provided to allow for any misalignment of the control panel 14 with the aperture 24. A bezel (not shown) is preferably provided for fitting around the aperture 24 once the control panel is in-situ.

25 The drawer 15 helps to contain and conceal the wires and the ducts 20,21 extending between the control panel 14 and the main body 10 of the hob. The arrangement of the control panel 14 on the drawer 15 also provides a convenient one piece hob, which can be fitted without any complicated wiring or ductwork.

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The positioning of the inlet and outlet 18,19 means that the fan draws in cool air from outside the cabinet and vents the warm exhaust air outside the cabinet. In this manner overheating of the hob is avoided.